



<b>Job title</b>	Research Associate / Fellow (Title will be 'Research Associate' where an appointment is made before PhD is completed)	<b>Job family and level</b>	Research and Teaching Level 4 (Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)
<b>School/ Department</b>	Sustainable Process Technologies Research Group, Department of Mechanical, Materials and Manufacturing Engineering	<b>Location</b>	Faculty of Engineering, University Park

### Purpose of role

The overarching purpose of this role is to develop life cycle inventory and life cycle assessment models of power electronics devices for more electric aircraft. The role holder will have primary responsibility for the development of these models to quantify the resource and environmental impacts of power electronics device manufacture and use in representative aircraft. The role holder will liaise with project partners and technical experts to develop the life cycle inventory of manufacturing operations, making use of experimental, prototype, and demonstration scale data, and supplementing this information with data and insights from publicly available sources. The role holder will have career development opportunities and will have the opportunity to use their initiative and creativity to identify areas for research, develop research methods and extend their research portfolio.

	<b>Main responsibilities</b> (Primary accountabilities and responsibilities expected to fulfil the role)	<b>% time per year</b>
1	<p>To plan and conduct research using recognised approaches, methodologies and techniques within the research area.</p> <p>To analyse and illuminate data, interpret reports, and bring new insights to research area.</p> <p>To write up research work for publication and/or contribute to the dissemination at national/international conferences, resulting in successful research outputs.</p> <p>To plan and manage own research activity and resolve problems, if required, in meeting own/team research objectives and deadlines in collaboration with others</p>	85
2	<p>To develop research objectives and proposals for own and/or collaborative research area.</p> <p>To identify opportunities and assist in writing bids for research grant applications. Prepare proposals and applications to both external and/or internal bodies for funding purposes.</p>	10

	<p>To build relationships with both internal and external contacts in order to exchange information, to form relationships for future collaborations and identify potential sources of funds and/or opportunities for collaboration</p> <p>To co-ordinate the operational aspect of research networks, for example, arranging meetings and contribute to collaborative decision making with colleagues in area of research.</p> <p>To collaborate with academic colleagues on areas of shared interest for example, course development, collaborative or joint research projects</p>	
3	<p>To provide support, guidance and supervision to other staff, where appropriate in own area of expertise.</p> <p>To supervise undergraduate and/or postgraduate students projects, as appropriate. To participate in the assessment of student knowledge and co-supervise projects at Masters level.</p> <p>To utilise and contribute to organising research resources and facilities, laboratories and workshops as appropriate</p>	5

Person specification

	<b>Essential</b>	<b>Desirable</b>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Effective collaborative working in a multi-disciplinary environment</li> <li>• Excellent oral and written communication skills, including the ability to communicate with clarity on complex information to diverse audiences through conference presentations, journal publications, or other means.</li> <li>• High analytical ability to analyse and illuminate data, interprets reports, and bring new insights.</li> <li>• Ability to build relationships and collaborate with others, both internally and externally.</li> </ul>	<ul style="list-style-type: none"> <li>• Planning general research programme and direction.</li> <li>• Making individual/team decisions about design and development of life cycle assessment models</li> <li>• To assist in preparing applications for new research funding.</li> </ul>
<b>Knowledge and experience</b>	<ul style="list-style-type: none"> <li>• Practical experience undertaking life cycle assessment studies</li> </ul>	<ul style="list-style-type: none"> <li>• Previous success in gaining support for externally funded research projects.</li> <li>• Experience of developing novel approaches, models, techniques or methods in life cycle assessment or related methodologies.</li> <li>• Collaborative research applications.</li> <li>• Direction of students/collaborators research.</li> <li>• Investigation and decisions about new software for the group.</li> <li>• Publication decisions, papers, conference abstracts etc.</li> <li>• Proposals for grant application.</li> <li>• Strategy for long term research programme.</li> </ul>
<b>Qualifications, certification and training (relevant to role)</b>	<ul style="list-style-type: none"> <li>• PhD (or near completion) in a relevant subject area</li> </ul>	



The University strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women's careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.

## Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
- Taking ownership** Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
- Forward thinking** Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
- Professional pride** Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
- Always inclusive** Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

## Key relationships with others

